MCU

STM32F103C8T6

U1

Pin	Signal
10	PA0-WUKP
11	PA1
12	PA2 — UART2_TX
13	PA3 — UART2_RX
14	PA4 — TDO
15	PA5
16	PA6 — TDI
17	PA7
29	PA8
30	PA9 — LED_RUN
31	PA10
32	PA11 — USB_N
33	PA12 — USB_P
34	PA13/JTMS/SWDIO — D_SWDIO
37	PA14/JTCK/SWCLK — D_SWCLK
38	PA15/JTDI
5	OSC_IN/PD0
6	OSC_OUT/PD1
44	BOOT0
7	NRST
1	VBAT
24	VDD_1
36	VDD_2
48	VDD_3
9	VDD_A

Signal	Pin
PB0	18 — nRST
PB1	19
PB2/BOOT1	20 — BOOT1
PB3/JTDO	39
PB4/JNTRST	40
PB5	41
PB6	42 — LED_CON
PB7	43
PB8	45
PB9	46
PB10	21
PB11	22
PB12	25 — TCK_SWCLK
PB13	26
PB14	27 — USB_ENUM
PB15	28
PC13-TAMPER-RTC	2
PC14-OSC32_IN	3
PC15-OSC32_OUT	4
VSS_1	23
VSS_2	35
VSS_3	47
VSSA	8

nRST — R9 10K — 3V3
BOOT1 — R1 10K — GND
R10 100R TCK_SWCLK — TMS_SWDIO

C1 20pF
C2 20pF
X1
GND
3V3
R4 10K
C3 0.1uF
R5 10K
BOOT0
GND
3V3

SWD

P1
4 — D_SWDIO
3 — D_SWCLK
2
1
3V3
GND

LED

LED_RUN
D1 RED
R3 10K
GND

LED_CON
D2 BLUE
R2 10K
GND

HEADER

J1
1 — UART2_RX
2 — UART2_TX
3 — nRST
4 — TDO
5 — TDI

J2
1 — R16 100R TCK_SWCLK
2 — R17 100R TMS_SWDIO
3 — GND
4 — 3V3
5 — 5V_USB

POWER

3V3
Q1 S8550
R12 0R
USB_ENUM — R11 1K5
R15 1K5
GND
R8 1K5
F1
5V_USB
C6 1uf
GND

U2 RT9193-33
1 Vin Vout 5
2 GND
3 EN BP 4
C4 1uf
C5 104
3V3
C7 22nF
GND
GND

USB_N — R6 22R
USB_P — R7 22R

USB1
4 VCC
3 D-
2 D+
1 GND
USB
GND

Title

Size	Number		Revision
A4			

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Value	Footprint	Comment	Designator	Description	Quantity
100R	0603_R	R0603	R10, R16, R17	Resistor	3
22R	0603_R	R0603	R6, R7	Resistor	2
22nF	0603_C	22nF	C7	Capacitor	1
20pF	0603_C	C0603	C1, C2	Capacitor	2
10K	0603_R	R0603	R1, R2, R3, R4, R5, R9	Resistor	6
8MHz	49SMD	XTAL	X1		1
1uF	0603_C	1uf	C4, C6	Capacitor	2
1K5	0603_R	R0603	R8, R11, R15	Resistor	3
0.1uF	0603_C	104	C5	Capacitor	1
0.1uF	0603_C	C0603	C3	Capacitor	1
0R	0603_R	R0603	R12	Resistor	1
	0603_LED	BLUE	D2	Typical RED, GREEN, YELLOW, AMBER GaAs LED	1
	0603_LED	RED	D1	Typical RED, GREEN, YELLOW, AMBER GaAs LED	1
	FU 0805	Fuse 2	F1	Fuse	1
	HEADER_4x1	Header 4	P1	Header, 4-Pin	1
	HEADER_SMT_5	Header 5	J1, J2	Header, 4-Pin	2
	LQFP48_N	STM32F103C8T6	U1	LowPower MCU	1
	SOT23	S8550	Q1	PNP Bipolar Transistor	1
	SOT23-5	RT9193-33	U2		1
	USB_A_G	USB	USB1		1

TDI R3 22R
TDO R5 22R

J2
1 2   R4 22R TCK_CK
3 4
nRSTi
5 6   R6 22R TMS_IO
U_TX
7 8   3V3i
U_RX
9 10   5V
Header 5X2

3V3i

D2 GREEN R2 1.5K
D1 RED
R1 1.5K

D3
BLUE

R7
1.5K

GND

GND

3V3o   J1   3V3o
NC_TRST 1 2
TDI   3 4
TMS_IO   5 6
TCK_CK   7 8
NC_RTCK 9 10
TDO   11 12
nRSTo   13 14
         15 16
         17 18
         19 20
Header 5X2

GND

J3
1   U_RX
2   U_TX
3
4   3V3i
5   5V
Header 4

GND

3V3
2   3V3i
1   3V3o
Header 2

nRST
2   nRSTi
1   nRSTo
Header 2

	Title		
Size	Number		Revision
A4			
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